

What is claimed is:

1. An optical system which guides a displaying luminous flux from a display device to an eye of an observer, comprising:

a first optical element and a second optical element in order from the side of an exit pupil of the optical system to the side of the display device,

wherein a combined optical power provided by an emergent surface of the second optical element and an incident surface of the first optical element is a negative optical power, and optical system forms an intermediate image with the displaying luminous flux in the first optical element.

2. The optical system according to claim 1, wherein the display device is a reflective display device,

and the optical system forms further comprises a third optical element between the reflective display device and the second optical element.

3. The optical system according to claim 1, wherein the optical system forms a pupil image in an optical path of the displaying luminous flux in the first optical element.

4. The optical system according to claim 1, wherein the optical system forms a pupil image in an optical path of the displaying luminous flux in the second optical element.

5. The optical system according to claim 1, wherein at least one of the first and second optical elements includes a reflective surface decentered with respect to an optical path of the displaying luminous flux.

6. The optical system according to claim 1, wherein the first optical element includes at least a first surface which has a reflecting action and a second surface which reflects the displaying luminous flux reflected by the first surface back toward the first surface such that a central principal ray of the display luminous flux incident again on the first surface is reflected and travels toward a substantially opposite side to a reflecting side in the previous reflection with respect to a normal to the first surface at a hit point of the central principal ray.

7. The optical system according to claim 1, wherein the first optical element reflects the displaying luminous flux a plurality of times by a reflective surface which is decentered with respect to an optical path of the displaying luminous flux,

and an the optical system includes a case where an inner product which is formed between outer products each formed by a vector indicating incident light and a vector indicating reflected light in the respective reflections is negative.

8. An image display apparatus comprising:
a display device which forms an original image; and

the optical system according to claim 1.